

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

JC12 Rec'd PCT/PTO 25 APR 2005

Applicant(s): Ernest C. Chen, Weizheng Wang, Guangcai Zhou, Tung-Sheng Lin and Joseph Santoru

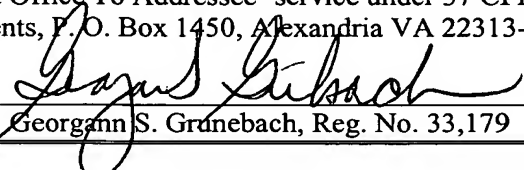
Docket No.: PD-202130

Title: LOWER COMPLEXITY LAYERED MODULATION SIGNAL PROCESSOR

CERTIFICATE OF MAILING UNDER 37 CFR 1.10  
 Express Mail mailing label number: EU433761938US  
 Date of Deposit: April 25, 2005

I hereby certify that this paper or fee is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to Mail Stop PCT, Commissioner for Patents, P. O. Box 1450, Alexandria VA 22313-1450.

By:

  
 Georgann S. Grunebach, Reg. No. 33,179

MAIL STOP PCT  
 Commissioner for Patents  
 P. O. Box 1450  
 Alexandria VA 22313-1450

Dear Sir:

We are transmitting herewith the attached:

- ☒ Transmittal sheet, in duplicate, containing Certificate of Mailing Under 37 CFR 1.10.
- ☒ Form PTO-1390: TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371.
- The fee has been calculated as shown below in the "Claims as Filed" table.
- ☒ Copy of Declaration of Inventorship as filed in PCT/US03/032264
- ☒ Copy of Assignment and Assignment Recordal Cover Sheet.
- ☒ A charge to Deposit Account in the amount of \$4850.00 to cover the Total National Fee and \$40.00 to cover the Assignment Recordal Fee (Total Fees: \$4890.00)
- ☒ Return postcard.

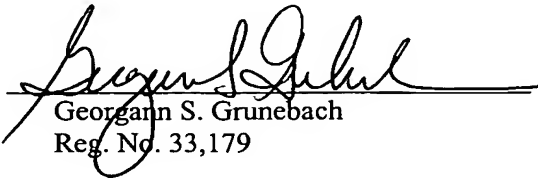
## CLAIMS AS FILED

Number of Claims Filed	In Excess of:		Number Extra		Rate		Fee
Basic National Stage Fee							\$300.00
National Stage Search Fee-US was ISA							\$100.00
National Stage Examination Fee-US was IPEA, and all claims satisfy PCT Article 33(1)-(4)							\$100.00
Total Claims							
63	20	=	43	x	\$50.00	=	\$2150.00
Independent Claims							
14	3	=	11	x	\$200.00	=	\$2200.00
MULTIPLE DEPENDENT CLAIM FEE							
TOTAL NATIONAL FEE							\$4850.00

FEE FOR RECORDAL OF ASSIGNMENT	\$40.00
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TOTAL FEES TO CHARGE TO DEPOSIT ACCOUNT	\$4890.00
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Please charge all fees to Deposit Account No. 50-0383 of The DIRECTV Group, Inc. (formerly Hughes Electronics Corporation), El Segundo, California. A duplicate of this sheet is enclosed.

By:   
Georgann S. Grunebach  
Reg. No. 33,179

The DIRECTV Group, Inc.  
RE/R11/A109  
2250 E. Imperial Highway  
P. O. Box 956  
El Segundo, CA 90245

Telephone No. (310) 964-4615

10/532632

JC12 Rec'd PCT/PTC 25 APR 2005

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

County of

Los Angeles

} ss.

On Dec. 11, 2003 before me,

Date

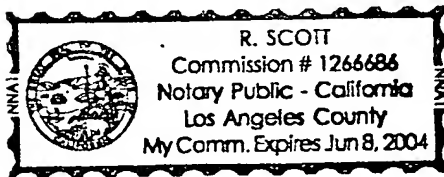
R. Scott, Notary Public

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared

Guangcai Zhou and Tung-Sheng Lin

Name(s) of Signer(s)

☐ personally known to me☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

**OPTIONAL**

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

**Description of Attached Document**

Title or Type of Document:

Foreign Filing of Invention in Argentina, Taiwan, Venezuela, Patent Cooperation Treaty

Document Date:

December 9, 2003

Number of Pages:

3

Signer(s) Other Than Named Above:

Ernest C. Chen**Capacity(ies) Claimed by Signer**

Signer's Name:

Guangcai Zhou & Tung-Sheng Lin☐ Individual☐ Corporate Officer — Title(s): \_\_\_\_\_☐ Partner — ☐ Limited ☐ General☐ Attorney-in-Fact☐ Trustee☐ Guardian or Conservator☒ Other:Inventors

Signer Is Representing: \_\_\_\_\_

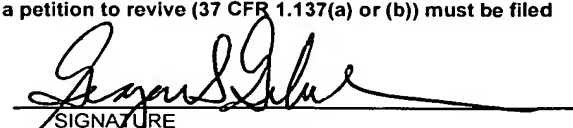
**RIGHT THUMBPRINT  
OF SIGNER**  
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER PD-202130
INTERNATIONAL APPLICATION NO. PCT/US03/032264		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/532632</b>
INTERNATIONAL FILING DATE 10 October 2003		PRIORITY DATE CLAIMED 25 October 2002
TITLE OF INVENTION LOWER COMPLEXITY LAYERED MODULATION SIGNAL PROCESSOR		
APPLICANT(S) FOR DO/EO/US Ernest C. Chen, Weizheng Wang, Guangcai Zhou, Tung-Sheng Lin and Joseph Santoru		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.		
2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.		
3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.		
4. <input checked="" type="checkbox"/> The US has been elected (Article 31).		
5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ul>		
6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ul>		
7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ul>		
8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).		
9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).		
10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).		
<b>Items 11 to 20 below concern document(s) or information included:</b>		
11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.		
12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.		
13. <input type="checkbox"/> A preliminary amendment.		
14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.		
15. <input type="checkbox"/> A substitute specification.		
16. <input type="checkbox"/> A power of attorney and/or change of address letter.		
17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.		
18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).		
19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).		
20. <input type="checkbox"/> Other items or information:		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <b>10/532632</b>		INTERNATIONAL APPLICATION NO. PCT/US03/032264		ATTORNEY'S DOCKET NUMBER PD-202130		
The following fees have been submitted				<b>CALCULATIONS</b>	<b>PTO USE ONLY</b>	
21. <input checked="" type="checkbox"/> Basic national fee..... \$300				\$ 300.00		
22. <input checked="" type="checkbox"/> Examination fee If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... \$100 All other situations..... \$200				\$ 100.00		
23. <input checked="" type="checkbox"/> Search fee Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100 International Search Report prepared and provided to the Office..... \$400 All other situations..... \$500				\$ 100.00		
<b>TOTAL OF 21, 22 and 23 =</b>				\$ 500.00		
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.						
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE			
- 100 =	/50 =		x \$250	\$		
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(h)).				\$		
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$		
Total claims	63 - 20 =	43	x \$ 50	\$ 2150.00		
Independent claims	14 - 3 =	11	x \$200	\$ 2200.00		
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$		
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 4350.00		
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.						
<b>SUBTOTAL =</b>				\$ 4850.00		
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				\$		
<b>TOTAL NATIONAL FEE =</b>				\$ 4850.00		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 40.00		
<b>TOTAL FEES ENCLOSED =</b>				\$ 4890.00		
				Amount to be refunded:	\$	
				Amount to be charged:	\$	
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>50-0383</u> in the amount of \$ <u>4890.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>50-0383</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p>						
<p><b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.</p>						
<p>SEND ALL CORRESPONDENCE TO: The DIRECTV Group, Inc. RE/R11/A109 P. O. Box 956 El Segundo, CA 90245</p>						
				 SIGNATURE Georgann S. Grunebach NAME		
				33,179 REGISTRATION NUMBER		